

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

Cover and Green Manure Crop

(Acre)

Code 340

DEFINITION

A crop of close-growing grasses, legumes, or small grain grown primarily for seasonal protection and soil improvement. It is usually grown for one year or less, except where there is permanent cover as in orchards.

PURPOSES

To control erosion during periods when the major crops do not furnish adequate cover; add organic material to the soil; and improve infiltration, aeration, and tilth.

CONDITIONS WHERE PRACTICE APPLIES

On cropland, construction sites, orchard, vineyards, wildlife and recreation areas.

CRITERIA

Seedbed Preparation -- No preparation is needed for aerial, no-till, dormant or frost seeding. Otherwise, prepare a seedbed that allows seed to be placed 1/4 to 1/2 inch in the soil.

Date of Seeding --

1. Fall seeding - August 15 to September 30.
2. Dormant seeding - December 10 to February 28.
3. Spring seeding - March 1 to May 20.

Fertilization -- Fertilizer, lime and other soil amendments should be applied according to soil test recommendations or expected needs of the crops to be grown.

Management -- Cover and green manure crops may be chemically killed (in the case of no-till) and left on the soil surface or incorporated by tillage equipment.

CONSIDERATIONS

Planning considerations for water quantity and quality.

Quantity --

1. Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.
2. Effects of vegetation on soil moisture.

Quality --

1. Filtering effects of vegetation on movement of sediment, pathogens, and dissolved and sediment-attached substances.
2. Effects of growing and decaying vegetation on nutrients in the root zone.
3. Effects on erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

PLANS AND SPECIFICATIONS

Use the lower recommended seeding rates when erosion is not a serious problem, a good seedbed is prepared, a no-till drill is used, existing crop residues are plentiful or only a temporary cover is desired. (i.e., set aside acreage)

Use higher seeding rates for aerial or broadcast seeding, when needed to reduce erosion, or to provide high rates of cover or forage.

OPERATION AND MAINTENANCE

A maintenance program shall be established by the landowner/user to maintain the cover - green manure crop for the desired purpose.

LAND USE	PLANT	SEEDING RATE (PLS/Ac.)	REMARKS
Cropland	Winter rye or wheat	1 1/2 - 3 bu/ac	Rye is more tolerant than wheat to herbicide carryover. Winter wheat, when sown in the spring, can be infested with a high number of leaf diseases and spring broods of Hessian fly.
	Annual Ryegrass	12 - 20 lbs/ac	
	Spring Oats	2 - 3 bu/ac	
	Sudangrass	15 - 30 lbs/ac	Has high tolerance to atrazine and can be seeded as late as July 1. Should be clipped before seed develops.
	Hairy Vetch	20 - 30 lbs/ac	Use only in a continuous corn operation because hard seeds may germinate later and pose a problem in wheat or soybeans. Hairy Vetch is best adapted to southern Indiana
	Hairy Vetch plus wheat or rye, or annual ryegrass	8 lbs/ac 1 1/2 bu/ac 10 lbs/ac	
	Tall fescue or Orchardgrass or Smooth Brome grass	8 - 15 lbs/ac 6 - 10 lbs/ac 8 - 15 lbs/ac	If grass is seeded with one of the legumes listed below, reduce rates of tall fescue, orchardgrass or smooth brome grass, by 50%.
	Sweet Clover or Crimson Clover or Red Clover or Alsike Clover or Alfalfa	6 - 12 lbs/ac 10 - 30 lbs/ac 5-10 lbs/ac 3-10 lbs/ac 8-15 lbs/ac	Inoculate the legume seeds with proper inoculant.
Construction Sites (Short Term)	Wheat, rye or spring oats	1 1/2 bu/ac	Control weeds and cover crop by mowing to comply with zoning or community regulations. Mulch or netting may be required in some situations to control erosion and get seeding established. In these situations refer to Standard & Specification 484, Mulching.
Orchards and Vineyards	Wheat or rye or bluegrass and	1 1/2 bu/ac 4-6 lbs/ac	Lime and fertilize according to soil test or past experience. Prepare seedbed and incorporate lime and fertilizer.
	ladino clover	1 lb/ac	Mulch around trees or cultivate during growing season to suppress growth of clover and conserve moisture.
Vegetable Land	Spring Oats and Rye	2 bu/ac 1 bu/ac	Prepare suitable seedbed soon after harvest. Lime and fertilize according to vegetable crop needs. Plant early enough to secure good growth before frost. Crops can be planted in dead oat residue without spring seedbed preparation. Rye is cultivated out after vegetables are up.